

ABSTRACT OF THE DISCLOSURE

A magneto-resistance effect element of the present invention allows detection of a micro-bit signal with a high sensitivity. The magneto-resistance effect element
5 is provided with a first magnetic substance layer, a spacer layer stacked on the first magnetic substance layer, a second magnetic substance layer stacked on the spacer, an insulating layer positioned adjacent to a stacked structure comprising the first magnetic
10 substance layer, the spacer layer and the second magnetic substance layer, a gate electrode positioned adjacent to the insulating layer, and a magnetism sensitive region controlled by a voltage applied to the gate electrode.

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